

CLAIMS:

1. A method of manufacturing a semiconductor device with a semiconductor body and a substrate and comprising at least one semiconductor element, which semiconductor device is equipped with at least one connection region and a superjacent strip-shaped connection conductor which is connected to the connection region, which connection region and connection conductor are both recessed in a dielectric, and a dielectric region of a first material is provided on the semiconductor body at the location of the connection region to be formed, after which the dielectric region is coated with a dielectric layer of a second material that differs from the first material, which dielectric layer is provided, at the location of the strip-shaped connection conductor to be formed, with a strip-shaped recess which, viewed in projection, overlaps the dielectric region and extends up to said dielectric region, and after the formation of the recess and the removal of the dielectric region, the connection region is formed by depositing an electroconductive material in the space obtained by the removal of the dielectric region, and the connection conductor is formed by depositing an electroconductive material in the recess, characterized in that for the first material use is made of an organic material, and for the second material use is made of a material having a higher decomposition temperature than the organic material, and the dielectric region is removed by heating it at a temperature above the decomposition temperature of the organic material yet below the decomposition temperature of the second material.
2. A method as claimed in claim 1, characterized in that a photoresist is used as the first material, and a dielectric resin having a higher decomposition temperature than the photoresist is used as the second material.
3. A method as claimed in claim 1, characterized in that a photoresist is used as the first material, and a liquid glass is used as the second material, which liquid glass is converted to solid glass by heating.

4. A method as claimed in claim 2, characterized in that the dielectric region is removed during a thermal treatment of the semiconductor body wherein the liquid glass is converted to solid glass.

5 5. A method as claimed in any one of the preceding claims, characterized in that the first material as well as the second material are applied in liquid state to the semiconductor body by means of a centrifuging process.

10 6. A method as claimed in any one of the preceding claims, characterized in that the dielectric region is formed by applying a further dielectric layer above which a mask is provided outside which the further dielectric layer is removed by means of etching, and the dielectric layer, after deposition, is covered with a mask which is provided with an aperture at the location of the recess to be formed, after which the recess is formed by means of etching.

15 7. A method as claimed in any one of the preceding claims, characterized in that after removal of the dielectric region and after formation of the recess, yet before deposition of the conductive material, the semiconductor body is cleaned.

20 8. A method as claimed in any one of the preceding claims, characterized in that copper is used as the electroconductive material, and prior to the deposition of the copper, an electroconductive layer is deposited at the location of the connection region to be formed, which electroconductive layer forms a barrier for copper.

25 9. A method as claimed in claim 8, characterized in that the electroconductive layer is applied by means of a physical vapor deposition process, and the copper is provided by means of an electroplating process.

10. A semiconductor device obtained by means of a method as claimed in any one of the preceding claims.